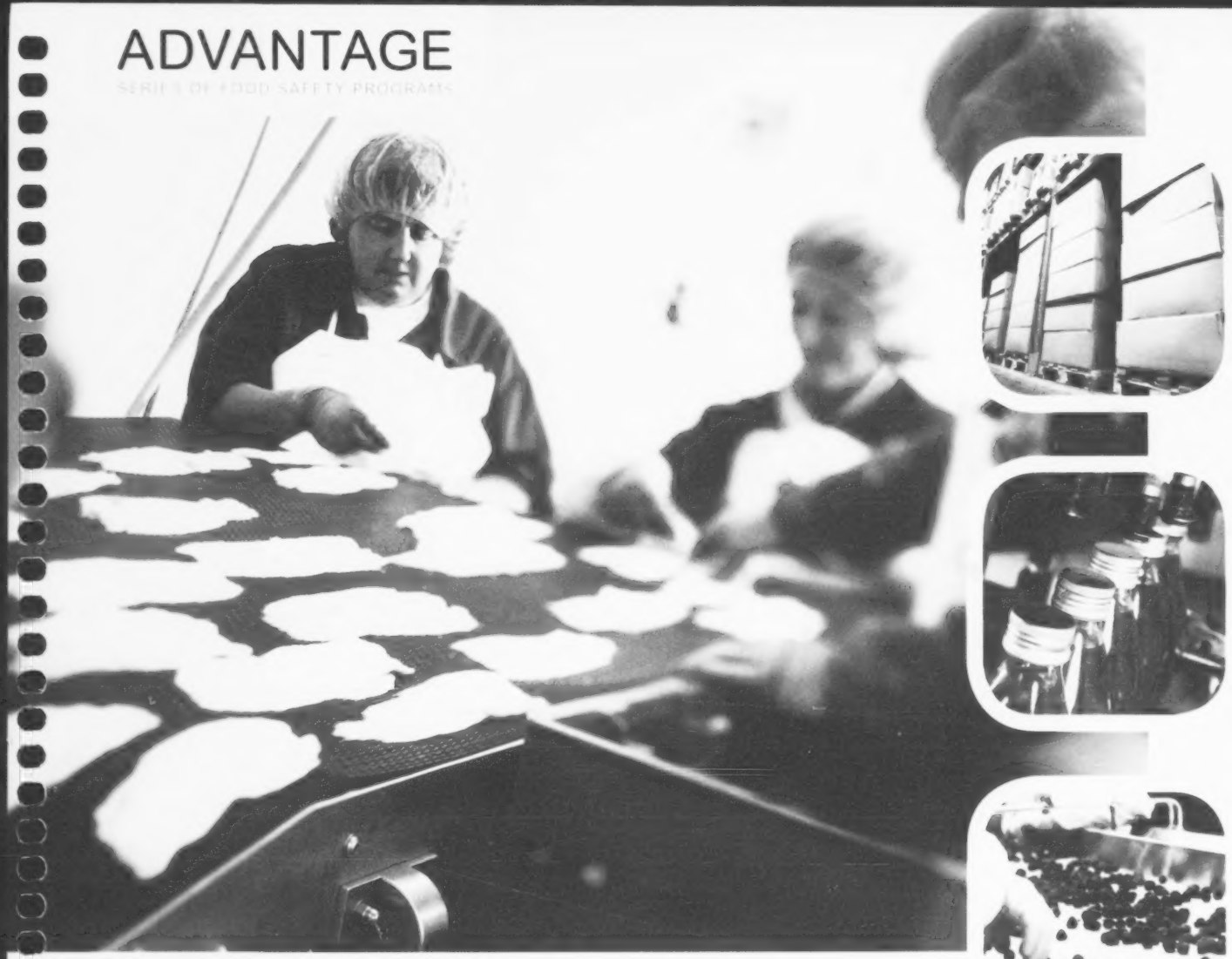
ADVANTAGE

SERIES OF FOOD SAFETY PROGRAMS



# Introduction to the *Advantage Series of Food Safety Programs*

**Version 3.0**

## For Food Processing Operations

**Book 1**

Ministry of Agriculture, Food and Rural Affairs

Ontario

## This document has been produced by:

Food Safety Programs Unit – Food Industry Staff
Food Safety and Traceability Programs Branch
Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)

## If you need more information?

**Contact:**

*Advantage Series of Food Safety Programs* for Food Processors
Ontario Ministry of Agriculture, Food and Rural Affairs
Food Safety and Traceability Programs Branch
1 Stone Road West
Guelph, Ontario N1G 4Y2

Toll Free: 1-877-424-1300
Email: advantage@ontario.ca
Web site: *www.ontario.ca/haccp*

## Legal Disclaimer

This book, Introduction to the *Advantage Series of Food Safety Programs*, Book 1 provides a general overview of food safety best practices that apply to the processing of food products in Ontario and highlights relevant legislation. Its contents are current as of the date set out below, and are subject to change without notice from time to time. It is available for informational purposes only and is not intended to provide any legal, financial or professional advice or recommendations to the user in any circumstances. Any reliance upon any information contained in this publication is solely at the risk of the user. To be clear about your specific legal requirements, you should refer to the relevant legislation. The user should also seek legal, financial or such other professional advice relating to the information contained in this publication. Should there be a conflict between the applicable legislation and the contents of this publication, the legislation shall prevail. Ontario legislation can be viewed in its entirety at: *www.e-laws.gov.on.ca.* Federal legislation can be viewed at: *http://laws.justice.gc.ca*

In no event shall the Province of Ontario and its officers, employees, servants or agents accept any liability for any failure to keep the content of this publication up to date, for errors or omissions or for any damages arising out of or related to the use of this publication.

Version Date: March 2010

## Acknowledgements

We would like to thank the following for providing feedback on the program:

- Betty Muise, Adult Education Specialist
- Dana Melanson, HACCP Coordinator, Derewlany Mini Carrots Ltd.

*Aussi disponible en francais.*

Published by the Ontario Ministry of Agriculture, Food and Rural Affairs
© Queen's Printer for Ontario, 2010
Toronto, Canada
ISBN 978-1-4435-1799-7

05-2010-450

# Table of Contents

Section 1: Why Do You Need an *Advantage* Food Safety Program? . . . . . 3

Section 2: Implementing the Three Levels of the *Advantage* Food Safety Program . . 11

Section 3: What is Involved? . . . . . 15

How Can You Learn More? . . . . . 21

Key Points and Contacts . . . . . 25

Appendix: How Do You Choose a Food Safety Program? . . . . . 27

# Section 1: Why Do You Need an *Advantage* Food Safety Program?

## The Purpose of This Book

The purpose of this book is to provide an overview of the activities and commitment required to implement a food safety program. A food safety program is a set of practices and procedures that you implement in your facility to control and reduce food safety hazards. Food safety hazards are things that could make a food product unsafe to eat. Hazards cause illness or injury in the person consuming the food product and can be biological, chemical or physical (e.g. bacteria, pesticides, allergens, metal grindings and bone fragments).

This book provides an overview, rather than details, so you can anticipate what resources and planning are needed when you embark on implementing a food safety program. Refer to other documents for the detailed information you might need once you are ready to implement your program. After reading this book, read *Book 2 – Advantage Good Manufacturing Practices* for detailed guidance on developing and implementing your food safety program.

## The Audience for This Book

This book is intended for those who are new to food safety programs such as Good Manufacturing Practices (GMPs), Hazard Analysis and Critical Control Point (HACCP) and traceability. This book will help you learn what is involved in adopting a food safety program. For example, perhaps your customers are asking or requiring you to implement a food safety program, but you do not know where to begin.

## What We Will Cover in This Section

In this section, we will discuss some of the reasons for being concerned about food safety and some of the motivations driving the decision to implement a food safety program.

We will also explain the Ontario Ministry of Agriculture, Food and Rural Affairs' (OMAFRA's) food safety program that you can follow, known as *Advantage*. The *Advantage* program for food processors simplifies food safety management into three basic levels. Each level represents a greater degree of complexity and control of the potential food safety hazards in your facility.

## Why Be Concerned About Food Safety?

"It's the way the world's going. The question is, do you want to be the last on the train, or do you want to be right up at the front?"

– Jamie Slingerland, Director of Viticulture, Pillitteri Estates Winery

### Increasing consumer concern

Recently, not-so-common names of pathogens (micro-organisms that cause disease) have crept into the news as we hear stories about *Salmonella* in peanut butter and cantaloupe, *E. coli O157:H7* in romaine and iceberg lettuce, and *Listeria monocytogenes* in ready-to-eat meats and cheese products. We are also hearing more about product recalls due to undeclared allergens. Outbreaks of food-borne illness and product recalls are gaining media attention. Recalls, in turn, increase public concern.

The growing attention to food safety is in part due to improved surveillance, greater reporting of food-borne illness and stronger food safety systems, but it is also due to changing circumstances.

- Micro-organisms multiply and evolve very quickly.
- Pathogens are very effective at evolving into strains that are more dangerous.
- Preferences are increasing for fresh and/or ready-to-eat foods, as well as highly processed products.
- Foods that are not cooked by the consumer limit consumers' ability to control hazards (e.g. through cooking).
- The more steps involved in production and processing, potentially the greater the risk of contamination.
- Globalization of the food supply is also increasing with demands for year-round variety.
- The more hands that handle a product, the greater the risk of contamination.
- Demographic changes, such as an aging population and greater awareness of severe allergies.
- More people are at risk and are more susceptible to becoming ill from contaminated products.

### The costs of food-borne illness

Contaminated food is not safe to eat. Contaminated food products can cause a range of illnesses and injuries:

- mild to severe food poisoning
- injuries to the digestive tract
- ongoing health problems
- even death

The Public Health Agency of Canada estimates that 10 million people suffer food-related illness every year in Canada. While many of these illnesses are short-lived and minor, some cost governments, the health sector and individuals considerable resources to resolve. *(www.phac-aspc.gc.ca/fs-sa/anatomy-eng.php)*

Illness and injuries due to food products are costly for us all.

#### *Individual costs*

For the lucky, a food-borne illness runs its course in a few days with mild symptoms such as vomiting and diarrhea, and perhaps a few days of lost work. For others, a food-borne illness can be more severe and in some cases turn into chronic disease, such as kidney disorders. The very young, elderly and immuno-compromised can even die from food-borne illness.

#### *Public costs*

Days off work cost our economy in lost production. Our tax dollars pay for doctor visits, diagnostic tests, stays in the hospital and treatments for fighting illness. Food-borne illness is an unnecessary burden on our public health care system.

#### *Business costs*

Beyond costs to society, your company can suffer from severe business losses. If a contaminated product is linked back to your company, you will likely deal with recalls and wasted product. This can affect your reputation and lead to lost sales, lost customers and lost business opportunities. If the crisis is long lasting or far-reaching, unwanted publicity and lawsuits can lead to job losses and in the end, bankruptcy or company closure.

The costs mentioned here are financial, but also consider how you would feel if your child became severely ill, or your friend had a miscarriage, or your elderly neighbour died from eating your contaminated food product. What would that cost you?

> "It's all about food safety. It's worrying about what our own kids are eating, as well as the public."
>
> – Kevin Bradshaw, HACCP Coordinator, World Meats Inc.

## Why Implement a Food Safety Program?

### Food safety assurance

The most obvious and primary benefit of food safety management is the enhanced food safety of your products that can provide peace of mind. A food safety program helps you keep biological, chemical and physical hazards out of your products.

### Business advantages

Food safety programs may also help your business. Many of the Ontario food processors who participated in OMAFRA's Food Safety Initiative grant program (2008) said that implementing a food safety system helped their companies increase sales, gain new customers and broaden their market reach. In fact, the return on investment was estimated to be about five times the program expenses in the first year alone. That is, companies got back about five dollars in benefits for every one dollar they spent.

Here are some other benefits you could also receive from implementing a food safety program.

**1. Increase customer confidence and open new markets**

- food safety programs can provide a point of differentiation related to product branding

"If we didn't have HACCP certification, we would have lost sales. We would have lost current customers."

– Bruce Vandenberg, Co-owner, Mariposa Dairy Ltd.

**2. Operate more efficiently saving you time and money**

- standardized procedures lead to improved product quality and consistency
- preventing rather than reacting to problems leads to fewer recalls, returns and customer complaints
- regular monitoring leads to anticipating problems earlier and the potential for less waste
- an analysis of your whole program helps identify the potential for reduced production costs
- food safety related due diligence may result in reduced insurance costs

"It helps with our own internal controls to find efficiencies and to make sure we're doing things right."

– Bob Kowall, Chief Financial Officer, Delmare Quality Foods

**3. Improve employees' behaviours and attitudes**

- employees will be more aware of hazards, be more conscientious and take pride in their work, which leads to decreased employee turnover

"The morale is a lot higher. You walk into the plant and you can actually feel it."

– Gus Cheung, Plant Manager, Sunrise Soya Foods

## What is the *Advantage Series of Food Safety Programs*?

When implementing a food safety program, you have the choice of several different programs to follow – public and private. This book follows public programs produced by OMAFRA entitled The *Advantage Series of Food Safety Programs*. The *Advantage Series of Food Safety Programs* is a set of programs that set standards for safe food production for the agri-food industry from farm through to processing. The programs are based on:

- industry best practices for food production
- the internationally recognized Hazard Analysis and Critical Control Point (HACCP) protocol

The programs centre on:

- the use of proven and accepted methods to help reduce food safety hazards
- ongoing maintenance and monitoring
- employee training

There are currently three *Advantage* programs for food processors:

1. *Advantage Good Manufacturing Practices (Advantage GMP)*
2. *Advantage HACCP*
3. *Advantage HACCP Plus*

There are also two other *Advantage* programs, one for farms and one for grain elevators.

### *Advantage* programs for food processors

OMAFRA initially developed *Advantage HACCP* as a practical, cost-effective approach to food safety management for non-federally registered food processors in Ontario. OMAFRA designed the program to be feasible for small and medium-sized processors, but applicable to all facilities regardless of size or commodity.

The *Advantage* programs for food processors can help you implement a solid plan for food safety. The programs guide you through all the necessary steps to help you enhance the safety of the food you process. The programs outline the best practices to follow to prevent, detect and control risks.

"For a smaller company that is growing quickly it's a way to propagate a culture of food safety where checks and balances catch mistakes at the beginning of the process rather than at the end."

– Martino Brambilla, President, Embassy Flavours

### The three-phased approach

The *Advantage* programs for food processors are divided into three levels.

1. *Advantage GMP*
   - Focuses on Good Manufacturing Practices (GMPs) that control hazards associated with personnel and food processing environment.

2. *Advantage HACCP*
   - Adds HACCP Plans. HACCP Plans control hazards associated with ingredients, food or specific food manufacturing process.

3. *Advantage HACCP Plus*
   - Adds traceability and security measures. Traceability ensures food products can be traced one step back to the supplier and one step forward to the buyer. Security measures help prevent intentional tampering or abuse of ingredients and food.

This three-phased approach makes it easier for food processors to adopt a program that meets their food safety and market needs. Each step increases food safety protection and improves marketability for your products. The program you choose or how far you proceed may depend on your market reach, buyer demand and level of food safety risk in your facility.

*Advantage* certification is available at each step. To learn more about audits and certification read *Book 5 – Preparing for an Audit*, you will find the *Advantage* programs and associated guidance are equally useful if you are not pursuing certification. The information provided in the *Advantage GMP* and *Advantage HACCP* books can help you implement a few or many new practices.

## Who is Responsible for Food Safety?

### Role of industry

Each person in the food chain has a responsibility to do their part in ensuring food safety, whether you are a farmer, a transporter, a processor, a distributor, retailer or consumer. Every hand that handles food has the potential to improve food safety or cause contamination.

Food safety requires multiple layers of cooperation and intervention. If you produce or handle food, you need a system to minimize harmful effects to public health and your business. When individuals do not take responsibility for their actions, gaps appear in food production. These gaps can lead to contamination, and, in turn, to illness for the consumer and a crisis for the business.

Industry has a responsibility to:

- commit to a food safety system over the long term
- allocate necessary resources
- meet food safety standards by developing and implementing practical, effective procedures that are specific to and work within your facility
- ensure all staff are trained
- verify staff remain diligent in their activities

## Role of government

Food safety is a shared responsibility and all levels of government – federal, provincial and municipal – have distinct and interconnecting roles in maintaining Ontario's food safety system. Governments are responsible for establishing and enforcing laws that protect us all from unsafe and fraudulent foods.

### *Federal*

Health Canada establishes policies and standards governing the safety and nutritional quality of all food sold in Canada, and carries out food-borne disease surveillance for early detection and warning. Enhanced public health surveillance systems are in place at all times to provide immediate information on outbreaks of food-borne illnesses.

The Canadian Food Inspection Agency (CFIA) administers and enforces all federal legislation related to food inspection, agricultural inputs, and animal and plant health. The CFIA performs this role on behalf of Health Canada, Agriculture and Agri-Food Canada, and Fisheries and Oceans Canada. The CFIA is responsible for inspecting and regulating federally registered establishments, which generally move products across provincial or national boundaries.

### *Provincial*

In Ontario, three provincial ministries are primarily responsible for food safety.

1. **Agriculture, Food and Rural Affairs (OMAFRA),** as the lead ministry, is responsible for dairy and meat inspection programs for provincially licensed plants. OMAFRA also administers and enforces a number of statutes established to minimize food safety risks and promote the orderly marketing of various commodities produced in Ontario.

2. **Health and Long-Term Care (MOHLTC)** is responsible for the protection of public health and sets food safety standards and policies for food premises. It has the power to condemn food. Its role in food safety inspection is delegated to the 36 public health units (municipal government).

3. **Natural Resources (MNR)** is responsible for food safety for fish and fish plant inspection for products harvested and offered for sale in Ontario.

### *Municipal*

Public health inspectors are responsible for inspecting approximately 80,000 food premises in Ontario. The key program responsibilities of the municipal public health units include food service and food retail establishments, and food processing facilities that are not federally registered.

Health units are also responsible for communicating information about food safety to the community and responding to food-related complaints.

In addition to their formal roles in making and enforcing laws and regulations, governments also promote the adoption of best practices, and provide guidance and support in the form of education, training and funding, when possible.

# Section 2: Implementing the Three Levels of the *Advantage* Food Safety Program

There are three levels in the *Advantage* Food Safety Programs:

1. GMPs
2. HACCP
3. Traceability and Security

In this section, we will explain each of these levels. After reading this section, you will have a good sense of what is meant when we talk about GMPs or HACCP or Traceability and Security.

## Implementing Level 1: Good Manufacturing Practices (GMPs)

### Good Manufacturing Practices (GMPs) are:

- food processing best practices implemented to create a safe and suitable environment for manufacturing of food
- the foundation of food safety systems, also known as HACCP prerequisite programs (and are implemented before the next level/HACCP)

GMPs involve rules, procedures and verification to ensure that people and premises do not present food safety hazards. People controls are practices and rules that food handlers and others in the facility follow to prevent or control food safety hazards. Premise controls are requirements for the condition of the facility that prevent or control food safety hazards.

### *Advantage GMP*

In the *Advantage GMP* program developed by OMAFRA, the implementation of GMPs is divided into nine program areas.

1. **Personnel** (e.g. hygiene, use of utensils and equipment, injuries and illness, access)
2. **Receiving & Storage** (e.g. unloading and loading practices)
3. **Handling** (e.g. storage, allergens, chemicals and waste)
4. **Sanitation** (e.g. cleaning and sanitizing, pre-operational inspection)
5. **Preventative Maintenance** (e.g. preventative maintenance and calibration)
6. **Pest Control** (e.g. birds, insects, rodents and pets)
7. **Recall** (e.g. product codes/labelling, mock recalls)
8. **Water** (e.g. water treatment and water safety)
9. **Environment** (e.g. establishment interior/exterior/design, equipment, surroundings)

You may choose to implement all nine areas or start with one or two areas. The choice is yours and may depend on your resources and areas of concern. To learn how to implement these GMPs, read *Book 2 – Advantage GMP.*

"There's no confusion, everything is standardized."

– Clement Fung, Vice-President, Sprout King

## Implementing Level 2: HACCP

### What is HACCP?

HACCP (pronounced HASSIP) stands for Hazard Analysis and Critical Control Point. HACCP is a science-based food safety management system recognized worldwide as the primary means for enhancing food safety. For a complete and proper HACCP system, you first need to implement Good Manufacturing Practices. Remember that GMPs take care of hazards associated with personnel and your premises environment.

HACCP system = GMPs + HACCP Plans

Implementing HACCP involves two key concepts and associated actions:

- conducting a Hazard Analysis – involves looking at all your ingredients, products and processing steps to determine where hazards are likely to occur
- determining Critical Control Points – a CCP is a point, step or procedure where a control measure can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level

A HACCP Plan is a document (or set of documents) that you develop to control hazards that are important for food safety and associated with your specific ingredients, products and processing steps. The details of your HACCP Plan will be unique to your facility.

### *Advantage HACCP*

*Advantage HACCP* adds HACCP Plans to a food safety system that starts with Good Manufacturing Practices. To help you develop credible controls, *Advantage HACCP* guides you step-by-step through the process of hazard analysis and determination of critical control points.

*Advantage HACCP* consists of eight forms that help you:

- identify hazards
- analyze hazards (determine critical control points)
- develop a plan to control the hazards

## Implementing Level 3: Traceability and Security

### Traceability

Traceability is the ability to follow ingredients and finished products along the food chain.

There are three key pieces of information that are gathered and shared along the food chain.

1. Identification of premises – a premise can be a specific farm, transportation vehicle, processing facility, warehouse, retailer, etc.
2. Identification of product – a product can be identified individually such as a livestock animal or in a collection, such as a lot of canned goods.
3. Recording of product movement – where the product is moving to and from.

### Security

In the context of food safety management, security refers to defensive measures you use to protect the food supply (ingredients, products and packaging) from deliberate tampering, intentional contamination and theft. Theft is a concern because once your products fall into uncertain hands you cannot be sure that products are handled properly, and your brand may be compromised.

### *Advantage HACCP Plus*

*Advantage HACCP Plus* adds traceability and security measures to Good Manufacturing Practices and HACCP Plans.

The traceability standards require policies and procedures to:

- trace ingredients backward to the supplier
- track ingredients and products through your premises (e.g. linking ingredients to finished products)
- track finished products forward to your customers

The security standards require policies and procedures that deal with:

- identifying employees
- ensuring employees know what to do in an emergency, how to identify security breaches and how to report breaches
- controlling the movement of people through your facility, including restricted access to sensitive areas and evacuation procedures
- controlling inventory, and incoming and outgoing shipments
- inspecting facility for security breaches

## Steps to Adopt an *Advantage* Program

Each of the program areas in *Advantage GMP* and *Advantage HACCP Plus* (traceability and security) has a written program standard (or set of standards), a requirement for training and a requirement for verification. This directly translates into the steps you take to adopt these programs. Implementing a HACCP plan has similar steps.

### Step 1: Develop your GMP program, HACCP Plan and/or traceability or security program

- First, you need to write down what you will do to control food safety hazards by creating a written program, which consists of procedures and records, training documents and records, and verification documents and records.
- This step may take a significant amount of time to complete (see *Book 2 – Advantage GMP* and *Book 3 – Advantage HACCP* for more details).

### Step 2: Train staff

- Next, you need to train employees on how to do what you have written.

### Step 3: Verify

- Third, you need to verify that employees do (and continue to do) what they have been trained to do.

Once you have created your documents, there are two levels of people involved:

1. **Performers** – those performing the food safety activity (e.g. the person washing their hands or checking incoming loads).
2. **Verifiers** – those checking to make sure the activities are done correctly.

# Section 3: What is Involved?

This section outlines the resources and key steps you need to implement a food safety program. By reviewing the types of resources required, you will also learn about a few of the essential elements or critical success factors of a food safety system. The other books in this series provide more detailed information and guidance on implementation.

## What Resources Will be Required?

Implementing a thorough food safety system – especially one that includes full HACCP Plans – takes time and resources. Time estimates range from six months for simple operations, to a few years for more complex processes and/or those with numerous product lines. You need to invest money and labour into your food safety system if you want it to succeed.

In general, labour/staff time is needed for:

- developing your food safety system (e.g. written procedures)
- training personnel
- conducting food safety activities
- recording results and following through with corrective actions
- updating and auditing

You may also need to purchase items or services including:

- further knowledge resources such as consultants, engineers, specific area experts or wages for new staff
- sanitation, laundry or pest control services
- new, modified or repaired equipment
- monitoring or measuring devices (e.g. thermometers)
- new construction materials or services for facility upgrades
- plant or personnel supplies (e.g. hairnets, waste containers)
- treatment chemicals (e.g. for water treatment)
- laboratory services and/or supplies

You will require labour to develop your system, train employees, monitor and record results. To complete some or all of these activities, a food safety coordinator and team is usually designated. This approach can save time and expenses and is outlined on the following pages.

## Essential element: management commitment

The number one reason food safety systems fail is a lack of management commitment. As a result, management commitment is a key resource required to support your food safety program.

Senior management must make the decision to adopt a food safety system. Management commitment also involves the support and involvement of a facility's top managers (generally owners, presidents, CEOs, etc.) throughout the process in the decision-making, development, implementation and maintenance of your food safety system.

If management does not demonstrate commitment through leadership and allocation of funds and resources, it will be very difficult to develop your food safety system and you will not have the necessary assurance that you are controlling hazards – your food safety system will not be effective.

If management is not committed to food safety practices, it will be hard for employees to take the program seriously and unlikely that employees will do what is necessary to enhance the safety of your products. Management commitment promotes employee cooperation and encourages an atmosphere of continuous improvement.

So, while everyone in the food industry is responsible for food safety, management has the ultimate responsibility.

Here are some examples of how managers can be involved:

- commit to the initial decision to adopt a food safety system and provide the necessary resource to develop, implement and maintain an effective system
- state openly to employees in meetings, through signs, etc., that the food safety system is important
- lead by example, attend food safety meetings, training and audits, and be fully aware of and follow food safety procedures and rules (e.g. hand washing, wearing hair nets) to ensure employees get the messages of expected behaviour
- preserve and implement disciplinary consequences for employees not fulfilling their food safety responsibilities (explain that their jobs depend on their commitment to food safety)
- show enthusiasm by taking opportunities to thank and congratulate employees for a job well done (e.g. after a successful audit)

### Essential element: a designated food safety coordinator or team

At least one person (or a team) should oversee the development of the system, monitor the progress of implementation and ensure the system is updated as needed. This person/team must have a very good understanding of your facility, its products and processes, as well as food safety. If there is no one at your facility that fits this role, you can:

- assign someone to this role and provide the resources for them to obtain the necessary food safety training
- hire a new staff member to fill this lead role
- hire a food safety expert/consultant (see below)

If your facility is large enough for a food safety team, the team should include staff with expertise from different areas of your facility, such as:

- quality assurance
- production
- maintenance
- sanitation
- shipping and receiving
- management

#### Do you need a consultant?

To develop and implement a food safety system you need someone with food safety expertise. Whether this expertise comes from formal education or equivalent work experience, your expert must have a good understanding of the hazards in your commodity sector and how to control them. If you do not have an expert on staff, a good consultant can offer the specialized skills and expertise needed.

The amount of help you need from a consultant will depend on how knowledgeable your employees are about food safety and how much you are already doing to control hazards.

### Essential element: training

Your business is built on people and is only as good as your people and their performance. Your food safety system depends upon properly trained people who do the job right, every time. Food safety activities should become part of the daily routine.

An effective food safety system means you and your employees know what to do – what tasks to complete, how to do those tasks and why you need to do the tasks. Regular and effective training is vital to ensure all personnel are aware and able to complete their food safety responsibilities.

All personnel need to understand their role in ensuring food safety, and follow applicable company rules and procedures. Different personnel – such as management, food safety coordinators, production, maintenance and sanitation employees – will each have varying requirements for training. To learn more about the specific needs of each of these audiences, and more detail on training requirements and recommendations, consult the other books in this series *(Book 2 – Advantage GMP* and *Book 3 – Advantage HACCP).*

### Essential element: documents

Documents have two important functions in a food safety system.

**1. Tools to make your food safety system effective and efficient**

Written procedures describe to employees, auditors and others how you plan to meet a specific standard. By planning and writing down the details of your food safety system, you can clearly assign specific responsibilities and explain or illustrate acceptable conditions. And written procedures and schedules can save time and money by providing a road map to food safety.

Written procedures and schedules help:

- ensure that your food safety system is properly designed and complete – you can see if you have adequately addressed all standards and requirements
- employees understand their responsibilities – they know what to do, how to do it, who should do it, when to do it, materials and supplies to use, records to complete
- ensure each person responsible takes consistent and proper action, every time

**2. Proof of due diligence**

Documents provide proof of your ongoing commitment to food safety and demonstrate your due diligence to ensure food safety. You need records to show that you are putting your food safety system into practice. Auditors and customers will look for objective evidence that your company is continually conforming to food safety standards.

> "One of the first questions potential customers ask is whether or not we are HACCP accredited."
>
> – Guy Armstrong, Sales & Marketing Manager, Honey Bar Products International Inc.

### What is it going to cost?

Costs vary significantly from facility to facility and depend upon several factors.

#### *Condition of your facility*

For example, if your building structure is old with surfaces that are not cleanable or that allow the entry of pests, you may require significant capital upgrades.

### State of your equipment

Food safety requires equipment that is accurate and consistently achieves the intended purpose (e.g. oven temperature). Equipment parts that contact food, ingredients or packaging materials must be cleanable and in a good state of repair. You may need to repair, adjust or replace equipment. You may also need to purchase new equipment for certain monitoring processes (e.g. a thermometer that can be calibrated, pH meter, metal detector).

### Level of food safety understanding and training of your employees

All personnel need a firm understanding of food safety and sufficient training to do their tasks. In estimating your costs for training, consider:

- number and positions of employees
- current or recent food safety training
- number of languages commonly understood
- employee turnover rate

### Number of products and processes

Your food safety system will likely be in proportion to your facility. In general, the greater the number of products, the more varied these products and the more complex your process and equipment, the more complex your food safety system will be.

### Associated risks of your ingredients, products and processes

The more risks inherent to your product and introduced during processing, the more controls you will need. When considering the associated food safety risks of your products, consider:

- the intended use (e.g. ready-to-eat versus further processed) and intended consumer
- the risks associated with ingredients including the use of restricted ingredients and the presence of allergens

### One-time and recurring costs

One-time costs are usually those associated with the planning, development and implementation of your food safety system – the initial investments.

Recurring costs are those incurred from on-going activities like training, record keeping, monitoring and updating. You cannot avoid these recurring costs if you want continued assurances of food safety (e.g. successful audits, certification).

# How Can You Learn More?

## Resources for Food Processors

### Manuals and tools

#### *Books*

There are five books in the *Advantage Series of Food Safety Programs* for Food Processing Operations. The books are intended to be read in order and take you from awareness of the programs through detailed step-by-step instructions for adopting the programs and ultimately, to certification.

*Book 1 – An Introduction to the Advantage Series of Food Safety Programs* for Food Processing Operations provides an overview of the *Advantage* programs for the food industry.

*Book 2 – Advantage Good Manufacturing Practices* describes the *Advantage GMP* program requirements and guides you through the main steps of developing GMPs for your facility with templates for written procedures and records, and numerous suggestions to meet the standards.

*Book 3 – Advantage HACCP* describes the *Advantage HACCP* program requirements and guides you through the development of HACCP Plans for your facility with the eight HACCP Plan forms.

*Book 4 – Advantage HACCP Plus* describes the *Advantage HACCP Plus* program requirements and guides you through the implementation of a traceability system and security measures.

*Book 5 – Preparing for an Audit* helps to prepare you for audits and guides you through the certification process for the *Advantage* programs.

To obtain copies of any of these books, phone 1-877-424-1300.

#### *Good Manufacturing Practices DVD*

This DVD covers the *Advantage* GMP Personnel standards (e.g. hand washing, personal attire and illness) in a user-friendly manner. Language is simple, dialogue is minimized and teaching points are highlighted with hand gestures, symbols and sounds. Each copy of the DVD includes translation into eight languages commonly found in the industry (English, French, Italian, Polish, Portuguese, Simplified and Traditional Chinese, and Spanish).

To obtain a copy of the DVD, phone 1-877-424-1300.

### *Advantage GMP Training Kit*

The *Advantage GMP* Training Kit is a collection of tools to help you train employees on Good Manufacturing Practices. The tools provide an affordable way of delivering in-house training customized to your facility. The material covers seven program areas:

Module 1: Personnel Practices
Module 2: Shipping, Receiving, Handling and Storage
Module 3: Sanitation
Module 4: Equipment Maintenance
Module 5: Pest Control
Module 6: Recall
Module 7: Water Safety

The kit includes MS PowerPoint slide presentations, trainers' notes, suggestions for speaking points, discussion ideas and participant workbooks.

To order a kit, contact the Alliance of Ontario Food Processors at 519-896-5967 or *www.aofp.ca*

## Additional information sources

### *Advantage web site*

The *Advantage* web site is *www.ontario.ca/haccp* and provides introductory information on the *Advantage* programs, support materials, upcoming events and a listing of certified facilities.

### *Advantage phone line*

Food processors in Ontario can call 1-877-424-1300 to talk to an *Advantage* food safety advisor.

### *Advantage email address*

Food processors in Ontario can email their questions to advantage@ontario.ca

### *Advantage workshops*

Since 2004, OMAFRA has held workshops focusing on the *Advantage* food safety programs for food processors in Ontario. To add your name to the invitation list, call 1-877-424-1300.

### *Advantage clinics*

Ontario food processors can call the *Advantage* phone line to arrange for a one-on-one question and answer session with an *Advantage* food safety advisor. Be prepared with specific questions and written materials you have developed to date.

## Resources Map

| What Is Your Challenge? | Supports That May Help |
|---|---|
| Lack of awareness and/or management commitment | • *Advantage* website: *www.ontario.ca/haccp*<br>• *Book 1* – Introduction to the *Advantage Series of Food Safety Programs* for Food Processing Operations |
| Lack of knowledge | • *Advantage* phone line: 1-877-424-1300<br>• *Advantage* email: advantage@ontario.ca<br>• *Advantage Series of Food Safety Programs* for Food Processors Books 1 to 5<br>• *Advantage* workshops<br>• *Advantage* clinics |
| Lack of time and/or resources to develop written procedures and records | • *Advantage* examples and forms provided in *Book 2 Advantage GMP* and *Book 3 – Advantage HACCP* |
| Lack of time and/or resources to train | • *Advantage GMP* Training Kit – *www.aofp.ca*<br>• *Good Manufacturing Practices* DVD<br>• *Advantage* workshops |
| Staff with varying levels of English literacy | • *Good Manufacturing Practices* DVD (presented in eight languages)<br>• Other materials may also be available in multiple languages: phone 1-877-424-1300 |
| Lack of recognition of your food safety practices | • *Advantage* certification from the Canadian General Standards Board and OMAFRA recognition |
| Financial constraints | • Check OMAFRA's web site for current funding programs: *www.omafra.gov.on.ca* |

# Key Points and Contacts

The *Advantage* programs can help you:

- enhance the safety of your products
- protect your company's good reputation
- meet market demands, possibly open up new markets
- run more efficient operations

Food safety management involves three key concepts.

1. Prevention
2. Science-based controls
3. Individual responsibility

Successful food safety systems require:

- management commitment to provide the necessary time, resources and leadership
- dedicated food safety coordinator and team
- training to communicate rules and procedures
- documents to ensure consistency and provide proof of ongoing commitment

The *Advantage Series of Food Safety Programs* includes three progressive levels, each building upon the previous.

1. *Advantage GMP* – focuses on good manufacturing practices that control hazards associated with people and the premise.
2. *Advantage HACCP* – adds HACCP Plans that control hazards associated with ingredients, products and processing steps.
3. *Advantage HACCP Plus* – adds traceability elements that tracing ingredients back to suppliers and products forward to your customers, and security measures that prevent deliberate tampering and intentional contamination.

**Contact the Food Safety and Traceability Programs Branch, OMAFRA to learn more.**

Web site: *www.ontario.ca/haccp*

Email: advantage@ontario.ca

Phone: 1-877-424-1300

# Appendix: How Do You Choose a Food Safety Program?

## Public and Private Programs

When implementing a food safety system, you have a choice of several different programs to follow. These programs can be divided into two groups – public and private. This book is about a public program, the *Advantage Series of Food Safety Programs*.

### Public programs

Public food safety programs are offered by the government. The Federal Government of Canada offers the Food Safety Enhancement Program (FSEP) for federally registered facilities. For some federally registered facilities, FSEP is mandatory. The Canadian Food Inspection Agency (CFIA) audits these facilities. Before *Advantage*, non-federally registered facilities had no government-recognized food safety program available. *Advantage* is a food safety program developed and offered by the Ontario provincial government. *Advantage* is not mandatory, but does offer the option of a government-recognized food safety program for any food processing facility in Ontario.

### Private programs

Private food safety programs are offered by private companies. Some examples of private programs are American Institute of Bakers (AIB), British Retail Consortium (BRC) Global Standard, International Standards Organization (ISO) 22000 and Safe Quality Food (SQF). Some private programs have been around for a long time and have built up reputations as rigorous and thorough programs.

All HACCP programs are based on principles developed by the Codex Alimentarius, which is part of the World Health Organization. Many HACCP programs (with GMPs incorporated) have been created all over the world, based on the Codex principles. However, there is no universally accepted GMP and/or HACCP program – no one single HACCP program has prevailed over the others.

Since these HACCP programs are based on the Codex principles, the HACCP requirements are very similar regardless of what program you adopt. All of these programs (e.g. BRC and SQF) include GMPs and HACCP, but in addition to GMPs and HACCP, each program has its own particular requirements for things such as document control, quality control, environmental controls, team meetings and senior management involvement.

## Choosing a Food Safety Program

If you intend to pay to have an audit of your food safety system, you will have to decide which program you would like to be audited against (or which program you will follow).

To make that decision, ask yourself a few questions.

1. **What can you afford?**

   - Maybe you just want to adopt the program but not pay for audit/certification.
   - Maybe you have some problems areas in your facility and only want to implement the GMPs that address the problems (e.g. personnel and sanitation).
   - Maybe you will lose a valuable customer if you do not have HACCP, and cannot afford not to have HACCP.

2. **What are your customers requiring?**

   - A food safety program? (Maybe a certificate isn't required, just assurance that you have GMPs and/or HACCP).
   - GMPs and/or HACCP audited by a third party?
   - Certification in a particular food safety program?
   - An official certificate for a particular program issued by an accredited auditor?

### Do you need an accredited auditor?

Food safety and quality programs are developed by organizations (public or private) that set the standards that must be followed. The organization that sets the standard does not necessarily conduct the audits, but does determine who is qualified and approved to audit and certify their program.

*For example, the British Retail Consortium (BRC) is a group of retailers in the United Kingdom that developed the BRC Global Standard, a product safety and quality certification program that consists of standards that food processors must meet. BRC does not audit food facilities but determines what qualifications auditors must have and "accredits" auditors. Only the accredited auditors are authorized by the Consortium to issue a BRC certificate to a processor.*

A particular auditor may be accredited to certify multiple food safety and quality programs.

And, some auditors are not accredited to certify any programs.

*For example, they may offer services to audit a food facility against BRC standards and simply issue their own certificate that demonstrates the facility has been audited by a third party, but it is not an official BRC certificate.*

This type of third-party audit may or may not be sufficient for your customers.

If you plan to be audited and become certified in a particular program (e.g. ISO 22000, BRC) make sure the auditor you hire is, in fact, accredited to audit and certify in that particular program.

## Why Should You Adopt the *Advantage* Programs?

"Because there is additional credibility with a government certified program, we chose *Advantage HACCP*."

– Ron Heleniak, Owner, Norwich Packers

We recommend that you use the *Advantage* resources to implement your food safety system regardless of what program you are required to adopt by your customers. The *Advantage* programs have a variety of resources available which are in a straightforward and easy to use manner.

### The *Advantage* programs include:

- ✓ practical suggestions, examples and guidelines
- ✓ logical, easy-to-understand requirements with rationales and clear organization
- ✓ universal standards applicable to all commodity sectors and company sizes
- ✓ voluntary, three-step approach so you can move ahead at your own pace
- ✓ flexible, outcome-based standards

### Adoption of *Advantage* programs:

- ✓ helps to ensure food safety
- ✓ provides procedures and records to demonstrate your commitment to food safety
- ✓ gives you a HACCP system based on international principles
- ✓ gives you GMPs based on industry-accepted best practices
- ✓ can meet third-party audits

Whether you choose *Advantage* certification or another certification, you can use the *Advantage* program to develop your food safety system. *Advantage HACCP* has standards for GMPs and HACCP only. So, depending on which food safety/quality program you choose (or are required to have by your customer) you may need to add some aspects to your program to meet the additional requirements of the particular program (e.g. environmental or quality controls).

If you have adopted *Advantage HACCP* in your facility, you have a HACCP program that should satisfy the HACCP requirements of your customers and the HACCP portion of programs such as BRC, SQF and ISO 22000.

www.ontario.ca/haccp